Broadcom BCM4389 Powers the World's First Wi-Fi 6E Smartphone

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Samsung Galaxy S21 Ultra delivers unprecedented multi-gigabit, low-latency Wi-Fi leveraging the 6 GHz band

SAN JOSE, Calif., Jan. 14, 2021 (GLOBE NEWSWIRE) -- Broadcom Inc. (NASDAQ: AVGO) today announced that the BCM4389 chip enables the world's first Wi-Fi 6E phone, the Samsung Galaxy S21 Ultra. The BCM4389 combines the benefits of the sixth generation of Wi-Fi with the pristine 6 GHz band to power the Galaxy S21 Ultra with Wi-Fi speeds over 2 Gbps. The chip also has a unique multi-radio Bluetooth 5 architecture that supports a premium audio experience with Samsung Galaxy Buds Pro, and Tri-Band Simultaneous (TBS) connectivity that improves Wi-Fi and Bluetooth performance and battery utilization.

Wi-Fi 6E, the latest generation of Wi-Fi, delivers multi-gigabit speeds and millisecond latencies by operating in the 6 GHz band. Countries, including the United States and South Korea, have tripled the available Wi-Fi spectrum by opening up 1.2 GHz of spectrum in the 6 GHz band for unlicensed use. This expansion creates seven additional 160 MHz channels for the BCM4389, unlocking the value of Wi-Fi 6E for remote work, education, telemedicine, and gaming. For more information on Wi-Fi 6E, please visit https://www.broadcom.com/info/wifi6e.

The Broadcom® BCM4389 and Samsung Galaxy S21 Ultra bring additional benefits to consumers worldwide. The chip delivers multi-gigabit Wi-Fi 6 performance in the existing 5 GHz band with 160 MHz capabilities. It also builds on the success of Broadcom's Wi-Fi 6 solutions, and instantly benefits from the ecosystem of 400 million Wi-Fi 6 Broadcom-enabled phones, PC, tablets, routers, enterprise access points, and carrier gateways around the world.

The BCM4389 was the world's first Wi-Fi chip authorized by the FCC to operate in the 6 GHz band. It is also in the first wave of devices certified by the Wi-Fi Alliance for Wi-Fi 6E operation. In addition to Wi-Fi 6E, Broadcom BCM4389's TBS connectivity architecture brings better Wi-Fi QoS, more precise indoor location accuracy and five times better battery utilization compared to current flagship connectivity solutions. Its multi-radio Bluetooth 5 architecture creates robust links to audio headsets even in heavily congested locations like subway stations.

"We are truly excited about this partnership with Broadcom in bringing a seamless and secure connected experience to our Galaxy users," said JM Choi, VP & Head of Convergence Development Group, Mobile Communications Business at Samsung Electronics. "Our joint dedication to a market-leading technology has evolved to now include Wi-Fi 6E on the Samsung Galaxy S21 Ultra, and enables an unrivalled connectivity experience for Galaxy users to share and consume content with confidence."

"We are honored to have collaborated with Samsung to enable the world's first Wi-Fi 6E phone," said Vijay Nagarajan, vice president of marketing for the Wireless Communications and Connectivity Division at Broadcom. "Back in 2019, our partnership in launching Wi-Fi 6 in Samsung Galaxy S10 kick-started a technology transition that has resulted in around half-a-billion Wi-Fi 6 devices in the world today. Today, this partnership has made the Samsung Galaxy S21 Ultra a showcase for the immersive possibilities with Wi-Fi 6E, and a harbinger for the technological disruptions that await us with Wi-Fi in the 6 GHz band."

"As the 6 GHz band continues to open up in countries across the world and as the 5 GHz band becomes increasingly crowded in many areas, the time to include Wi-Fi 6E in devices is now," said Phil Solis, research director at IDC. "Smartphones are both high data-rate and relatively ubiquitous devices that generally rely on Wi-Fi connectivity indoors, and their shift to using the 6 GHz band will have substantial impact on the performance of those devices and the networks they are on."

"Wi-Fi Alliance members have mobilized around Wi-Fi 6E in ways we've never seen, recognizing the tremendous latency and performance benefits devices can deliver to Wi-Fi users," said Edgar Figueroa, president and CEO of Wi-Fi Alliance. "Broadcom's chipset, among the first Wi-Fi 6E certified devices in our interoperability test bed, that powers Samsung's Wi-Fi 6E smartphone demonstrates the industry's rapid momentum to deliver Wi-Fi 6E benefits securely and reliably to Wi-Fi users."

PRODUCT HIGHLIGHTS

The BCM4389 is a smartphone Wi-Fi 6E / Bluetooth 5 combo chip. Key features include:

- Seven Wi-Fi and Bluetooth radios
- Support for 2 streams of Wi-Fi 6E
- Multi-Radio Bluetooth 5 with antenna beamforming
- Tri-Band Simultaneous (TBS) architecture including a dedicated background scan radio for Wi-Fi and Bluetooth
- Simultaneous dual-band operation
- 2.63 Gbps PHY rate
- Operation in 2.4 GHz and 5.1-7.125 GHz unlicensed bands
- 160 MHz channel bandwidth
- 1024-QAM modulation
- OFDMA
- MU-MIMO

For more information on Broadcom BCM4389, please visit https://www.broadcom.com/products/wireless/wireless-lan-bluetooth/bcm4389

About Broadcom

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software solutions. Broadcom's category-leading product portfolio serves critical markets including data center, networking, enterprise software, broadband, wireless, storage and industrial. Our solutions include data center networking and storage, enterprise, mainframe and cyber security software focused on automation, monitoring and security, smartphone components, telecoms and factory automation. For more information, go to www.broadcom.com.

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